

**COMBINED DECLARATION AND PRINCIPAL POWER OF ATTORNEY
FOR
PATENT APPLICATION**

As a below-named inventor, I (we) hereby declare that:

My (our) residence, post office address and citizenship, is (are) as stated below next to my (our) name;

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

CARBON TIPS WITH EXPANDED BASES

the specification of which

_____ is attached hereto.

 X was filed on February 27, 2001 as Application No. 09/795,660
and was amended on _____
(If Applicable)

I hereby state that I (we) have reviewed and understand the contents of the above-identified specification, including the claims.

I (we) acknowledge the duty to disclose all information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I (we) hereby appoint the following attorneys and/or patent agents to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

George L. Craig	Registration No. 29,293
Vincent A. Branton	Registration No. 39,120
J. Kenneth Davis	Registration No. 38,426
Joseph A. Marasco	Registration No. 32,798
James M. Spicer	Registration No. 26,096
Shelly L. Stafford	Registration No. 38,623
Kirk A. Wilson	Registration No. P-45,939

All of: UT-Battelle, LLC
 P. O. Box 2009
 Oak Ridge, Tennessee 37831-8243

Please direct all correspondence and telephone calls to the individual(s) identified in the Associate Power of Attorney.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of

first inventor:

Vladimir I. Merkulov

Inventor's signature:

V. Merkulov

Date:

04/27/01

Residence:

1634 Laurel Avenue, #B-12, Knoxville, TN 37916

Citizenship:

Russia

Post Office Address:

Full name of

first inventor:

Douglas H. Lowndes

Inventor's signature:

Douglas H. Lowndes

Date:

April 27, 2001

Residence:

2720 Pine Hill Drive, Knoxville, TN 37932

Citizenship:

USA

Post Office Address:

Full name of

first inventor:

Michael A. Guillom

Inventor's signature:

Michael A. Guillom

Date:

May 22, 2001

Residence:

903 Luttrell Street, #2, Knoxville, TN 37917

Citizenship:

USA

Post Office Address:

Full name of

first inventor:

Michael L. Simpson

Inventor's signature:

Michael L. Simpson

Date:

Apr. 1 27, 2001

Residence:

7745 Nubbin Ridge Road, Knoxville, TN 37919

Citizenship:

USA

Post Office Address:

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Vladimir I. Merkulov
Douglas H. Lowndes
Michael A. Guillorn
Michael L. Simpson

Group Art Unit: 2812

Examiner: Unknown

Serial No.: 09/795,660

Atty. Dkt. No.: UBAT:027US/JJB

Filed: February 27, 2001

For: CARBON TIPS WITH EXPANDED
BASES

**ASSOCIATE POWER OF ATTORNEY
FOR PATENT APPLICATION
Pursuant to 35 CFR §1.34**

Commissioner for Patents
Washington, D.C. 20231

Sir:

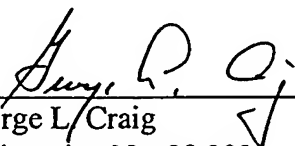
Please recognize as Associate Attorneys in this case:

Louis T. Pirkey, Reg. No. 22,393; David D. Bahler, Reg. No. 30,932; David L. Parker, Reg. No. 32,165; Richard J. Groos, Reg. No. 32,231; Stephen D. Dellett, Reg. No. 32,564; William G. Barber, Reg. No. 33,154; Michael S. Metteauer, Reg. No. 34,875; Mark B. Wilson, Reg. No. 37,259; Steven L. Highlander, Reg. No. 37,642; John J. Bruckner, Reg. No. 35,816; Erik R. Nordstrom, Reg. No. 39,792; Teresa J. Schultz, Reg. No. 40,526; Stephen P. Meleen, Reg. No. 40,724; Robert E. Hanson, Reg. No. 42,628; Michael C. Barrett, Reg. No. 44,523; Mark T. Garrett, Reg. No. 44,699; Gina N. Shishima, Reg. No. 45,104; and Matthew Bellinger, Reg. No. 46,547;

All of: Fulbright & Jaworski L.L.P.
600 Congress Avenue, Suite 2400
Austin, TX 78701

Please direct all correspondence and telephone calls to John J. Bruckner, (512) 536-3088 at the address set forth above.

Respectfully submitted,



George L. Craig
Registration No. 29,293
UT-Battelle, L.L.C.
P.O. Box 2009
Oak Ridge, TN 37831-8243

PATENTS ONLY

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original document or copy thereof.

1. Name of conveying party(ies):

Vladimir I. Merkulov, Douglas H. Lowndes,
Michael A. Guillorn, and Michael L. Simpson

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:



Assignment



Merger



Security Agreement



Change of Name



Other

Execution Date: 4/27/01, 4/27/01, 5/8/01, 4/27/01

2. Name and address of receiving party(ies):

Name: UT-Battelle, LLC

Street Address: Oak Ridge National Laboratory
Bethel Valley Road, P.O. Box 2008

City: Oak Ridge State: TN Zip: 37831-6255

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or registration number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s):

09/795,660

B. Patent No.(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: John J. Bruckner
FULBRIGHT & JAWORSKI L.L.P.
600 Congress Avenue, Suite 2400

City: Austin State: Texas Zip: 78701

6. Total number of applications and patents involved: 1

7. Total fee (37 C.F.R. 3.41) _____ \$ 40.00

☒ Enclosed

☒ Authorized to be charged to deposit account
if check insufficient or inadvertently omitted

8. Deposit account number: 50-1212/10100920/JJB
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

John J. Bruckner

06/19/2001

Name of Person Signing, Reg. No. 35,816

Signature

Date

Total number of pages including cover sheet, attachments and documents: 6

Mail documents to be recorded with required cover sheet information to:
Commissioner of Patents and Trademarks, Box Assignment, Washington, D.C. 20231

CERTIFICATE OF MAILING
37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Box Assignment, Washington, DC 20231, on the date below:

June 19, 2001
Date

John J. Bruckner

ASSIGNMENT

WHEREAS, I (we) , the below-named inventors, whose residence and post office is (are) as stated below, have invented certain new and useful improvements in

CARBON TIPS WITH EXPANDED BASES

for which an application for United States Letters Patent was executed on _____, the specification having been filed on February 27, 2001, and accorded Serial No. 09/795,660, and

WHEREAS, UT-Battelle, LLC, a limited liability company of the State of Tennessee, having an office at Oak Ridge National Laboratory, Bethel Valley Road, P.O. Box 2008, Oak Ridge, Tennessee 37831-6255, hereinafter called the ASSIGNEE, is desirous of acquiring the entire right, title and interest in the application and invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries. (Agents of ASSIGNEE are authorized to fill in blanks and make corrections in this document).

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I (we) hereby assign to ASSIGNEE the entire right, title and interest in the application and the invention, to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefor on the invention.

I (we) hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, I (we) hereby agree to communicate to said ASSIGNEE or its representatives any facts known to us respecting said invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said invention in the United States of America and in any and all foreign countries.

I (we) further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on me (us), our heirs, legal representatives, and assigns.

Full name of first inventor: Vladimir I. Merkulov

Inventor's Signature: V. Merkulov Date: 04/27/01

Residence: 1634 Laurel Avenue, #B-12, Knoxville, TN 37916

Post Office Address: _____

Citizenship: Russia

State of Tennessee
County of Anderson

On this 27th day of April, 2001, before me, a Notary Public in and for the County and State aforesaid, appeared Vladimir I. Merkulov, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

Clare M. Chiswood
Notary Public
Exp. 6/30/2004

SEAL

Full name of first inventor: Douglas H. Lowndes

Inventor's Signature: Douglas H. Lowndes

Date: April 27, 2001

Residence: 2720 Pine Hill Drive, Knoxville, TN 37932

Post Office Address: _____

Citizenship: USA

State of Tennessee
County of Anderson

On this 27th day of April, 2001, before me, a Notary Public in and for the County and State aforesaid, appeared Douglas H. Lowndes, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

Clare M. Cawood
Notary Public
Exp. 6/30/2004

SEAL

Full name of first inventor: Michael A. Guillorn

Inventor's Signature: Michael A. Guillorn

Date: 5-8-01

Residence: 903 Luttrell Street, #2., Knoxville, TN 37917

Post Office Address: _____

Citizenship: US

State of Tennessee)

County of Anderson)

On this 8th day of May, 2001, before me, a Notary Public in and for the County and State aforesaid, appeared Michael A. Guillorn, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

Claire M. Chiswood
Notary Public

SEAL

Full name of first inventor: Michael L. Simpson

Inventor's Signature: Michael L. Simpson

Date: Apr. 27, 2001

Residence: 7745 Nubbin Ridge Road, Knoxville, TN 37919

Post Office Address: _____

Citizenship: USA

State of Tennessee
County of Anderson

On this 27th day of April, 2001, before me, a Notary Public in and for the County and State aforesaid, appeared Michael L. Simpson, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

Claire M. Chiswood
Notary Public
6/30/2004

SEAL